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## Resonant Inelastic X-ray Scattering (RIXS), a new tool for high pressure science

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The Resonant Inelastic X-ray Scattering (RIXS) program at the APS is one of the world-leading synchrotron radiation programs. It addresses a multitude of complex materials with novel phenomena of enormous scientific importance and great technological potential, such as unconventional superconductivity, colossal magnetoresistance in manganites, multiferroics, and graphene. In order to push the envelope for this technique, leading to higher scientific impact and a more diverse user community, recently we start to explore the emerging scientific opportunities by integrating the high pressure environments with RIXS. In this presentation, we will show some preliminary high-pressure RIXS studies on the insulator-metal transition in the 5d transition metal oxides, irradiates. These results indicate RIXS is the best synchrotron method for probing the electronic dynamics of correlated systems at high pressure, which promises a direction in material science.

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